

**U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
PALM SPRINGS-SOUTH COAST FIELD OFFICE**

**ENVIRONMENTAL ASSESSMENT  
EA Number CA-660-05-10**

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**DATE:** November 8, 2004

**TITLE / PROJECT TYPE:** Northeastern Meccacopia OHV Route Restoration

**CASE FILE / PROJECT NO:** N/A

**FUNDING CODE:** 7123 **PROGRAM ELEMENT:** JA

**BLM OFFICE:** Palm Springs-South Coast Field Office  
690 W. Garnet Avenue, P.O. Box 581260  
North Palm Springs, CA 92258-1260

**APPLICANT / PROPONENT:** BLM

**LOCATION OF PROPOSED ACTION:** San Bernardino Base Meridian, Riverside County

Township 6S, Range 11E:	Section 20, SW ¼ ; Section 24, N ½ and E ½ ; Section 26, S ½ ; Section 30, NE ¼
Township 6S, Range 12E:	Section 10, SE ¼ ; Section 15, N ½ ; Section 18, S ½ ; Section 20, SE ¼ ; Section 22, W ½
Township 6S, Range 13E:	Section 10, E ½ ; Section 11, NE ¼
Township 6S, Range 14E:	Section 8, NW ¼

**PROJECT ACREAGE:** Approximately two acres (3,850 linear meters)

**USGS TOPOGRAPHIC MAPS:** Cottonwood Spring, Hayfield, Hayfield Spring, and East of Red Canyon

**LAND USE PLAN CONFORMANCE and Other Regulatory Compliance:** In accordance with Title 43 Code of Federal Regulations 1610.5-3, the proposed action and alternatives are in conformance with the following approved land use plans: **California Desert Conservation Area (CDCA) Plan, 1980; Coachella Valley CDCA Plan Amendment, 2002; Northern and Eastern Colorado Desert (NECO) Coordinated Management Plan (CDCA Plan Amendment, 2002).**

The US Fish and Wildlife Service (USFWS) was consulted informally during this process (see EA CA-660-03-016 and associated comments by USFWS). A determination of beneficial affect was made by the BLM and the USFWS and formal consultation was not required. The Federal Land Policy and Management Act of 1976 (FLPMA) charges the BLM with the responsibility to manage public lands in a manner that will “protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values”. Section 106 of the National Historic Preservation Act, as implemented at 36 CFR Part 800, requires Federal agencies to take into account the effects of their undertakings on historic properties.

## NEED FOR THE PROPOSED ACTION

The Meccacopia Special Recreation Management Area (SRMA) includes the Mecca Hills and the Orocopia Mountains. This Environmental Assessment covers restoration work to be done in the North Eastern part of the Meccacopias. Over fifty Off-Highway Vehicle (OHV) routes occur in the area, including the Red Canyon Jeep Trail, Amy's Wash, and Summit Road. The NECO plan determined route designations in the area, but the designations have yet to be fully implemented on the ground with signs and rehabilitation of closed routes. Many side trails spur off of the designated routes. These side trails (non-designated routes) may be causing increased soil erosion, soil compaction, and fragmentation of critical habitat for the desert tortoise (*Gopherus agassizii*). The proposed rehabilitation sites include numerous non-designated side trails and hill climbs that are offshoots from BLM designated routes. These hill climbs and trails are the sites for the proposed rehabilitation efforts in order to minimize soil erosion and loss of native vegetation. Rehabilitating non-designated routes encourage OHV's to stay on BLM-designated routes within the project area. Increased OHV compliance together with increased plant cover and diversity of shrubs, forbs, and grasses is expected to improve wildlife habitat, increase wildlife populations, and restore ecosystem processes.

A few closed routes in the Meccacopia SRMA are used by Calif. Department of Fish and Game (CDFG) personnel to access and maintain Big Game Guzzlers. These routes have been identified through informal consultation and will not be rehabilitated, although efforts will be made where possible to ensure that only CDFG personnel have access to the routes. Restoration actions will not preclude the creation of routes which may be necessary to access new Big Game Guzzlers which may be created in the future.

A timely response by BLM for soil protection and vegetation restoration in the study area will afford greater protection to species of special concern to BLM managers, to outstanding scenic landscapes, and recreation uses, thereby meeting public expectations for environmental protection while advancing opportunities for high-quality, safety-conscious OHV recreation.

## DESCRIPTION OF THE PROPOSED ACTION and ALTERNATIVES

### Background

In FY 2005, the BLM Palm Springs-south Coast Field Office (FO) would restore upland desert scrub and desert wash woodland in the Meccacopia Special Recreation Management Area (SRMA). The restoration work outlined in this EA lies outside of congressionally designated wilderness areas and private land in-holdings. The California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division is supporting this effort as part of its long-range strategy to conserve the desert soils and the native vegetation of OHV recreation sites while improving the quality of outdoor experiences for the public recreating with OHV's.

### 1. Proposed Action

The Bureau of Land Management proposes to restore unauthorized side trails and hill climbs that stem from designated routes in the Northeastern part of the Meccacopia SRMA, using the Student Conservation Association (SCA) as contractors for the restoration work. Work may also be done by volunteers or BLM personnel in order to ensure completion of the project, following the procedures outlined below. Approximately 3,850 meters of unauthorized routes will be restored, with an average width of two meters, for a total of 7,700 square meters (1.9 acres). A brief description of all restoration sites may be found in **Table 1**. Below is a summary of the restoration techniques which may be employed for the project. The SCA restoration technicians will decide which treatments to employ at each site unless given specific instructions by the

restoration ecologist. In almost all instances only hand tools will be used. Overall, the restoration aims to restore the soil and topography to a more natural state which will enhance natural regeneration of vegetation.

### **Restoration Techniques:**

#### *Decompaction*

Non-designated trails with repeated vehicle traffic may require soil decompaction to increase water infiltration. Improving water infiltration allows plants to establish and burrowing animals such as ants, rodents, and foxes, to inhabit the soil again. Workers shall use hand tools such as soil spades, spading forks, and shovels to loosen the top two to six inches of soil.

#### *Soil Pitting*

Soil pitting contours the soil to direct water flow and draw wind-blown seeds to focal spots on the ground. Pitting first creates bowls approximately one to two feet wide and six inches deep. This practice creates microsites in the bowls to increase seed germination and small plant growth.

#### *Soil Imprinting*

Soil imprinting entails raking small trenches to roughen the texture on surface soil and to collect wind-blown seed. Hand tools such as shovels and rakes shall be used.

#### *Raking*

On non-designated trails formed after a single trespass (one person at one time) or trails with little or no vegetation trampling or soil compaction after trespass, work crews shall rake or sweep with a broom the top one inch of soil to hide these evidence of tracks. Soils may also be contoured to match surrounding land. Only hand tools shall be used.

#### *Barricading with Rice Straw Bales*

Certified weed-free bales of rice straw shall obstruct OHV travel on closed areas formerly used for non-designated hill climbs and on non-designated OHV trails. The bales slow and diffuse soil erosion and water flow down slopes. Over time, rice straw bales break down and provide mulch for plants grown from seeds trapped on the upslope side of the decomposing bale. A truck to transport bales is the only mechanical equipment required.

#### *Terracing with Berms*

Berms or terraces slow and disperse water flow. People shall use hand tools to disturb the top one to six inches of soil.

#### *Vertical Mulching*

Dead plant material placed at the beginning of non-designated trails off of BLM-designated trails can disguise these trails and deter additional illicit OHV traffic. Large desert shrubs on the soil surface act as barricades. Similarly, dead shrubs or branches planted upright in the soil make the trail blend in with surrounding vegetation. Vertical mulch also benefits restoration by trapping wind-blown seeds and lessening wind erosion just above the ground surface. This work shall be primarily accomplished with hand tools. Little soil disturbance would be needed except where mulch is “planted” and thus requires a small hole to anchor the material.

#### *Large Rocks*

Barricades may consist of a row of large rocks and boulders to deter use in especially fragile areas. Placement of rocks requires no equipment and little or no soil disturbance is associated with their use. Fencing would entail soil disturbance, but no areas have been identified thus far

where fencing is necessary.

#### *Planting Vegetation*

Re-vegetating involves directly planting native species to the line of sight from a BLM-designated OHV trail to accelerate improvements to soil stability, vegetation cover and diversity, and wildlife habitat. Eventually re-vegetation disguises trails. Planting shall make use of hand tools (shovels) and some mechanized equipment (augers) to dig holes up to two feet deep and one foot wide, for the largest transplants. In extraordinary cases, transplantation of larger plants would require somewhat larger holes potentially up to three feet deep and three feet wide. After planting, work can contour soil to direct the flow of rainwater or irrigation water to plant roots.

Planting vegetation requires considerable advance work. First, the restoration ecologists shall gather local provenances of seeds for native shrub, forb, and grass species. In dry years, it may be necessary to irrigate specimens of plant species desired for propagation by seed. To propagate plants from seed and to hold young plants before outplanting, the restoration ecologists shall form a contract with Joshua Tree National Park Nursery or construct portable lath houses.

#### *Seeding*

Seeding requires rakes to collect seed from seed banks in the soil or from dried seedpods still attached on plants. Hand sowing spread seeds across the soil surface. Raking shall disturb at most the top one-inch of soil. Hand seeding also may be concurrent with soil pitting (see above) to improve seed germination rates.

#### *Signing*

Insufficient or ambiguous signs on BLM-designated routes cause responsible OHV riders to accidentally ride on non-designated routes. To help riders, the restoration ecology team shall work closely with a trail maintenance team to maintain existing signs and place new signs wherever necessary. Various signs may be appropriate to site needs; and recreational, directional, special designation, or informational signs may be needed. Special designation signing shall also indicate areas of re-vegetation to prevent unintended trampling. Signing work involves a carsonite sign driver that can disturb soil to a one-foot depth but with a minimal surface width disturbance.

#### *Removing Manufactured Materials and Structures*

The restoration team shall remove litter and other unsightly or potentially dangerous manufactured materials less than 50 years old. If the restoration team discovers previously undocumented materials that appear to be more than fifty years old, they shall consult with the cultural resources specialist at the Palm Springs FO. The cultural resources specialist will assess whether removing materials older than 50 years is appropriate and what documentation or mitigation is appropriate. Removal shall include materials of non-historical value such as abandoned automobiles. Removal of large objects may involve the hiring of a separate contractor such as a Tow-Truck company. Disturbances related to removal will be kept at a minimum, and if removal would pose a threat to a species of concern, no removal will occur.

#### *Eradicating Noxious Weeds*

The restoration crew shall remove noxious non-native plants and perennial shrubs growing in non-designated routes and trails by hand or with hand tools. If the infestation of noxious weeds appears to require applications of herbicides (as with *Tamarix* sp), the restoration ecologists shall consult with the BLM Palm Springs FO natural resource specialist coordinating the noxious weed program at the FO to arrange for herbicide treatments by an integrated pest management person licensed by the State of California. In the case of *Tamarix* sp., chainsaws may be used by

certified personnel under the supervision of a natural resource specialist.

*Maintaining Site Integrity*

People remove barriers and trample plantings on occasion. To minimize costly irreversible damage, rehabilitated sites require maintenance as they are undergoing natural restoration. The restoration ecologists may undertake additional restoration efforts and barriers on a case-by-case basis.

**Summary of work:** Work will be done between the hours of 0700 and 1900, from December 2<sup>nd</sup> 2004 to May 31<sup>st</sup> 2005 or until all the sites specified in **Table 1** have been restored. Summary information on the unauthorized routes to be restored can be found in **Table 1**, and **Figure 1** is a map of the area to be restored.

**Table 1.** UTM coordinates, route number, site number, azimuth, and length to the line-of-sight of the unauthorized routes to be restored under the proposed action. NAD 1983 datum was used for UTMS.

<i>UTM Easting</i>	<i>UTM Northing</i>	<i>Route Number</i>	<i>Incursion Number</i>	<i>Azimuth (degrees)</i>	<i>Line of Sight (meters)</i>
611705	3723231	660074	1	140	100
612103	3723213	660074	2	160	100
613790	3723344	660074	3	344	100
613788	3723338	660074	4	170	100
614018	3723380	660074	5	354	100
614018	3723377	660074	6	170	60
618206	3724003	660074	7	110	100
618442	3724074	660074	8	210	100
604681	3721456	660088	1	173	40
610233	3720497	660132	2	268	30
612619	3722714	660133	1	110	100
612654	3722585	660133	2	156	50
605220	3721540	660175	1	10	60
630501	3726063	660195	1	164	90
630539	3726072	660195	2	330	150
630539	3726072	660195	3	170	100
633220	3726575	660195	4	95	35
618362	3724507	660199	1	340	150
618471	3725062	660199	2	174	100
618410	3724494	660199	3	96	45
618541	3724274	660200	1	115	20
618585	3724222	660200	2	4	30
617758	3721907	660202	1	154	100
617986	3721661	660202	2	270	150
617986	3721661	660202	3	80	100
617780	3722165	660209	1	154	40
617808	3722497	660216	1	134	150
634148	3726528	660308	1	172	50
634758	3726479	660308	2	166	55

**Table 1 (continued).** UTM coordinates, route number, site number, azimuth, and length to the line-of-sight of the unauthorized routes to be restored under the proposed action. NAD 1983 datum was used for UTMS.

<i>UTM Easting</i>	<i>UTM Northing</i>	<i>Route Number</i>	<i>Incursion Number</i>	<i>Azimuth (degrees)</i>	<i>Line of Sight (meters)</i>
617775	3721667	663507	1	80	100
615877	3721749	663507	2	260	175
615877	3721749	663507	3	194	70
625341	3725407	660195	5	160	50
628649	3725647	660303	1	80	50
628346	3724996	660303	2	190	80
635870	3722133	660286	1	240	100
636022	3719875	660286	2	180	150
630597	3720509	660290	1	330	175
630438	3720515	660290	2	180	100
630409	3720586	660290	3	50	100
620049	3725367	660197	1	90	30
620141	3725385	660197	2	270	45
620168	3725389	660197	3	90	10
620224	3725401	660197	4	270	20
620487	3725440	660197	5	90	20
620517	3725440	660197	6	270	15
620651	3725460	660197	7	90	15
620710	3725480	660197	8	270	25
621173	3725547	660197	9	90	35
621227	3725550	660197	10	270	15
621359	3725576	660197	11	90	55
621452	3725589	660197	12	270	10

**Figure 1.** Locations of restoration sites in the Northeastern Meccacopia Project Area.

{ SHAPE \\* MERGEFORMAT }

## **2. No Action Alternative**

The Proposed Action would not be undertaken. Existing management and use of the site would continue subject to applicable statutes, regulations, policy and land use plans. Habitat degradation would continue from OHV intrusions. Any revegetation will occur naturally.

## **AFFECTED ENVIRONMENT**

### **1. Area Description**

A description of the affected environment can be found in the California Desert Conservation Area Plan (1980, with amendments 1982-1999) EIS and is incorporated by reference.

#### **Wildlife Habitat**

Restoration of non-designated trails to natural conditions would occur on sites with pre-existing disturbances from OHV traffic. Restoration activities would create new but temporary, small-scale disturbances to set natural soil recovery and re-vegetation processes in accelerated motion for site rehabilitation and improved wildlife habitat.

#### **Soils**

A general description of soils found in the Dos Palmas ACEC is part of the California Desert Conservation Plan (1980, with amendments 1982-1999).

#### **Water**

Restoring vegetation to the surface of non-designated OHV trails increases the plant cover. The small amount of precipitation normally received permits only slow plant growth. Benefits, therefore, to vegetation cover and resulting animal habitat and reduction in soil erosion will be slowly accruing. Rain events in the area tend to be comparatively brief and may be locally intense. Foliage of desert vegetation reduces the impact and thus erosional force of water on desert soils when rains are brief and not intense.

#### **Vegetation**

Restoration activities would take place in creosote (*Larrea tridentata* - *Ambrosia dumosa*) scrub and microphyll woodland vegetation communities. The proposed actions would use only the established motorized routes within the Meccacopia SRMA, including adjacent lands, to access restoration sites. Further descriptions of the affected environments can be found in the California Desert Conservation Area Plan. Avoiding travel elsewhere prevents trampling to vegetation from vehicles and machinery used in restoration activities.

#### **Realty**

A few private in-holdings and right-of-ways are present in the study area. The restoration work team must take care not to disturb private lands and must avoid travel on private property to avoid liability to the Bureau of Land Management.

#### **Recreation**

Many recreational activities and access to sites depend on the designated network of roads, trails, and dispersed campsites. Non-designated routes and trails create impacts by encouraging camping and vehicular recreation in areas not suited and not intended for (and designated as 'closed' to) these activities. The proposed action will enhance the recreational value of the area



by restoring non-designated routes and signing the designated routes, thereby improving visual resources and encouraging legal use.

### **Wilderness**

No restoration activities under this EA shall take place inside BLM Wilderness or wilderness study areas.

### **Sensitive Wildlife Species**

#### **Reptiles**

**Desert tortoise (*Gopherus agassizii*):** Desert tortoise are widely distributed in the desert: from as far north as Olancho south to Mexican border and from the Colorado River west to near Lancaster. The Desert Tortoise (Mojave Population) Recovery Plan shows two major populations or recovery units. These are the Northern Colorado Desert and Eastern Colorado Desert Recovery Units. The highest densities of tortoises are in Chemehuevi and Ward Valleys, on Chuckwalla Bench. Causes for declines include habitat loss, diseases, excessive predation on young tortoises by raven, collecting, shooting, highway and vehicle kills, and other factors.

Their food preference has been shown to be overwhelmingly native annuals and perennials rather than exotic species such as *Schismus* sp., *Erodium cicutarium* or *Bromus madritensis* ssp. *rubens*. The native plants are much richer in nutrients and may be essential for health and reproduction. The desert tortoise is a Federal Threatened Species (Mojave Population only) and State-listed Threatened Species.

**Flat-tailed horned lizard (*Phrynosoma mcallii*):** Flat-tailed horned lizard occur throughout the southern portion of the Colorado Desert from the Coachella Valley southward and eastward into Arizona and south into neighboring Sonora. Large portions of the historic range have been lost to inundation of the Salton Sea, urbanization, and agricultural development. Despite considerable effort over the past 15 years, population sizes and trends are unknown due to difficulties in finding an effective population estimation procedure. The flat-tailed horned lizard is a BLM California Sensitive Species and a State Species of Special Concern.

**Couch's spadefoot toad (*Scaphiopus couchi*):** The range of Couch's spadefoot extends from extreme southeastern California eastward through Arizona, New Mexico, Texas, and Oklahoma and southward into Mexico. In California, they occur in the Planning Area from Chemehuevi Wash south to the Ogilby area in Imperial County.

This species is of concern because (1) it has a small range in California; (2) populations are declining in other states; (3) it has a precarious life history; and (4) the capability of sites to impound runoff is easily destroyed. Road construction has created some pond habitat in Imperial County, but these are often subject to off-highway vehicle driving which can destroy soil impoundment capability. In addition to habitat disturbance, vehicles create noise similar to rainfall, resulting in emergence when conditions are not favorable. Vehicles may also crush vegetative debris which is essential as daytime cover. The Couch's spadefoot toad is a BLM California Sensitive Species and a State Species of Special Concern.

#### **Mammals**

**Desert bighorn sheep (*Ovis canadensis* subspecies *nelsoni*)** Bighorn sheep occur in small, isolated subpopulations (demes) within the Sonoran metapopulation. Specific trend data for the subpopulation is not available, but some have declined in recent years.

It has been shown that population sizes of 50 individuals or less went extinct in less than 50 years, while populations of greater than 100 sheep persisted for up to 70 years. Movement between subpopulations functions to reduce inbreeding in small subpopulations and to maintain genetic vigor in the larger metapopulation. Movement between mountain ranges is necessary to recognize extirpated ranges. Desert bighorn sheep is a BLM California Sensitive Species and a State Fully Protected Species and a Game Species.

**Colorado Valley Woodrat** (*Neotoma albigula venusta*): The range of Colorado Valley woodrat is from southern Nevada, southeastern California, northeastern Baja California, to western Arizona. Historically, the range of the Colorado Valley woodrat appears to have changed little, even though portions of the range are lost to agriculture and urban development. Colorado Valley woodrats (California subspecies of White-throated woodrat) are found in a variety of habitats including low desert, pinyon-juniper woodlands, and desert-transition chaparral. Areas such as washes where organic debris gathers are particularly attractive. They are often found where prickly pear cactus and mesquite occur. In rocky areas, they prefer using crevices in boulders for cover and nest sites.

The most important threats are the loss of habitat and reduction in habitat quality by removal of nest material such as cactus and woodland. Habitat quality could be reduced by fires or conversion to exotic annuals. The Colorado Valley woodrat is a State Species of Special Concern.

**Burro deer** (*Odocoileus hemionus eremicus*): Burro deer eat foliage from various riparian and microphyll woodland trees, such as willow, palo verde, and ironwood. Various other shrubs complete the diet depending on the season.

Major threats to burro deer are loss of habitat to agricultural development, urbanization, and tamarisk infestation along the Colorado River and, at least in the 1980's, drowning in the Coachella Canal. Burro deer is a State Game Species.

**Mountain Lion** (*Felis concolor*): Within the Study Area mountain lion are restricted to the southern Colorado Desert from Joshua Tree National Park south and west to the Colorado River. They are found in very low numbers primarily in the mountains and wash systems in Imperial County. Burro deer, the primary prey, are known to spend the hot summer and fall in riparian areas along the Colorado River and in dense microphyll woodlands near the Coachella Canal. In winter and spring they move up major washes north from the Coachella Canal and west from the Colorado River. Presumably mountain lions respond to these movements. It may be that mountain lions in the Study Area are merely transient individuals wandering out of other areas and not part of a resident population of mountain lions.

Habitat fragmenting factors, such as Interstate Highways (especially Interstate 10) and aqueducts (especially the Coachella Canal), that affect the distribution and movements of burro deer are probably important to the distribution of mountain lions in the Study Area. Deer populations along the Colorado River have declined as tamarisk has replaced native riparian vegetation; mountain lion numbers have probably declined with this primary prey. The mountain lion in the Study Area is sometimes referred to as Yuma puma (f.c. browni). Under that name it is a State Species of Special Concern.

**California leaf-nosed bat** (*Macrotus californicus*): California leaf-nosed bats occur in the deserts of California, southern Nevada, Arizona and south to northwestern Mexico. In

California, they are now found primarily in the mountain ranges bordering the Colorado River Basin, with some records occurring as far west as the Eagle Mountains. In California, surveys showed about 20 maternity colonies and about the same number of winter roosts. The two largest roosts (each sheltering 1500 bats in winter) are in mines in extreme southeastern California. Almost all known roosts are in warm mines.

California leaf-nosed bats occur in lowland desert habitat in California in close proximity to desert wash vegetation. They are dependent on either caves or mines for roosting habitat. All major maternity, mating, and overwintering sites are in mines or caves.

The primary factors responsible for the declines are roost disturbance, the closure of mines for renewed mining and hazard abatement, and the destruction of foraging habitat. The combination of limited distribution, restrictive roosting requirements, and the tendency to form large, but relatively few colonies make this species especially vulnerable. California leaf-nosed bat is a BLM California Sensitive Species and a State Species of Special Concern.

**Pallid bat** (*Antrozous pallidus*): Pallid bats are known from Cuba, Mexico, and throughout the southwestern and western United States. Population trends are not well known, but there are indications of decline. Urbanization, destruction of old buildings, disturbance in caves and old mines, and eradication as a pest are threats to the species.

Pallid bats forage primarily on large arthropods caught on the ground or gleaned off vegetation. Between foraging bouts, pallid bats congregate in night roosts in mines, buildings, and under bridges. Pallid bat is a BLM California Sensitive Species and a State Species of Special Concern.

**Townsend's big-eared bat** (*Plecotus townsendii*): Townsend's big-eared bats are distributed throughout the western United States. In desert areas, old mines may contain from one to several dozen individuals. Recent surveys show marked population declines for this species in many areas of California. A combination of restrictive roost requirements and intolerance of roost disturbance or destruction has been primarily responsible for population declines of Townsend's big-eared bats in most areas. The tendency for this species to roost in highly visible clusters on open surfaces, near roost entrances, makes them highly vulnerable to disturbance. Roost loss in California has usually been linked directly to human activity (e.g., demolition, renewed mining, entrance closure, human-induced fire, renovation, or roost disturbance). The loss of foraging habitat is also a probable factor in declines of populations in along the Colorado River, where the native floodplain community has been lost to agriculture and tamarisk infestation. Townsend's big-eared bat is a BLM California Sensitive Species and a State Species of Special Concern.

**Pocketed free-tailed bat** (*Tadarida femorosaccus*): Despite only a limited number of records, pocketed free-tailed bats are known to occur in the desert from March through August, when they then migrate out of the area. They have an uneven distribution in the southwestern United States and Mexico. In California, they are found primarily in creosote bush and chaparral habitats in proximity to granite boulders, cliffs, or rocky canyons. Recent observations in California show that this species occurs at only isolated locations in the southern third of the State.

Rock climbing and pesticide spraying may be threats, but specific information is lacking. Pocketed free-tailed bat is a State Species of Special Concern.

**Western mastiff bat** (*Eumops perotis*): Historical records for the western mastiff bat were primarily in southern California between the Colorado River to the coast, but populations are now known to occur throughout the State. Current population trends are not known. They are found in a variety of plant communities, but they roost in cliff faces of granite, sandstone, or basalt. They move relatively short distances seasonally, but do not undergo prolonged hibernation. The species has been heard in open desert, at least 15 miles from the nearest possible roosting site.

Potential threats to the roosting and foraging habitat of western mastiff bats include urban expansion, rock climbing, blasting, vandalism, extermination for pest control, and pesticide spraying. These large, noisy bats are vulnerable to the hysteria which often surrounds bat colonies. Western mastiff bat is a BLM California Sensitive Species and a State Species of Special Concern.

## Birds

**LeConte's thrasher** (*Toxostoma lecontei*): LeConte's thrashers are distributed from the Mojave Desert east into southern Utah and northern Arizona, and south into northern Mexico. A disjunct population occurred in the San Joaquin Valley, but most of that range has been lost to agricultural and urban development. LeConte's thrashers are distributed throughout the Study Area, but many areas with suitable habitat are unoccupied. LeConte's thrasher is a State Species of Special Concern.

### **Loggerhead Shrike** (*Lanius ludovicianus*)

The Loggerhead Shrike is a short distance migrant that nests in the canopies of desert woodland species. The Loggerhead Shrike is known for its unique behavior of impaling its prey on thorns, barbed wire fences, and similar projections, hence its preference for nesting near areas containing such objects. Though the reason for this behavior is not totally understood, it is supposed that it serves as a means of storing food, and also to assist in tearing apart the prey since the Loggerhead Shrike does not possess very strong claws. Maligned because it occasionally feeds on small birds, the shrike feeds mainly on beetles, grasshoppers and small rodents. The Loggerhead Shrike has extraordinary eyesight and can focus on a grasshopper in a field 50 to 70 yards away.

Throughout its North American range, the Loggerhead Shrike has aroused serious concern because of its declining numbers throughout its range. It is believed that long-term changes in land use by humans on breeding and wintering ranges probably have contributed most to the decline. Because Loggerhead Shrikes are thinly distributed over a large area it is difficult to estimate the trend in desert Loggerhead Shrike population. Loggerhead Shrikes are distributed throughout the creosote scrubland and Paloverde – Smoketree – Ironwood Woodlands of the Study Area. The Loggerhead Shrike is a State Species of Special Concern.

**Crissal Thrasher** (*Toxostoma crissale*): Crissal thrashers occur from southwestern Utah, southern Nevada, and southeastern California east to southern New Mexico and southwestern Texas and south into Sonora. They are found along the Colorado River Valley, but elsewhere in California populations are highly local and uncommon. Crissal thrasher are also found in Milpitas Wash, Indian Wash, and Chuckwalla Bench and in the Chuckwalla Dune Thicket. Inventory data elsewhere are scant. Agricultural and urban development have greatly reduced the distribution in the Coachella and Imperial Valleys. Agricultural development, urbanization, and tamarisk invasion have greatly reduced numbers. The species is highly vulnerable to noise and other disturbances. Crissal

thrashers can be parasitized by brown-headed cowbirds, but they will eject cowbird eggs from their nests. Crissal thrasher is a State Species of Special Concern.

**Golden eagle** (*Aquila chrysaetos*): Golden eagles are the largest raptor in the Planning Area. They forage over rolling foothills and valleys and nest on cliffs in mountainous terrain. Golden Eagles are found throughout North America. They are uncommon, permanent residents throughout the State, but they are most common in Southern California.

They eat mostly rabbits, hares, and rodents, but they occasionally take snakes and other vertebrates as opportunity arises. They need open grassland or low shrub-land for foraging. They hunt by soaring, perching, or quartering during the day.

Some golden eagles migrate through the Study Area in Spring and Fall. Some may winter in and near mountains. Nests, referred to as eyries, are usually on secluded cliffs with overhanging ledges. The large platform of sticks at the eyrie may be used for many years. Usually two young are raised in late spring and early summer.

The major threat is disturbance at the eyrie, especially in the early stages of nesting. Golden eagle is a State Species of Special Concern and is protected by the Bald Eagle Protection Act.

**Ferruginous hawk** (*Buteo regalis*): Ferruginous hawks do not breed in California. They migrate from their breeding grounds in the plains of Canada and the U. S. south to wintering grounds in eastern Colorado and western Kansas to southern Texas. They winter in very low numbers throughout the West. They are known to migrate through California in September and April. They overwinter in very small numbers from mid-October to mid-March in the lower Colorado River Valley, Yuha Basin, West Mesa, and the agricultural areas of Imperial Valley.

Ferruginous hawks are large, broad-winged raptors. They are usually found in grasslands or sparse brushlands and use high, lone trees and power poles for perching. In winter they are found in desert scrub, the fringes of pinyon-juniper woodlands, grasslands, pastures, fallow winter croplands, and playas.

Ferruginous hawks hunt from high perches or by flying low over open terrain. They spend more time on the ground foraging than other hawks. They eat mostly small mammals, particularly rabbits and hares, ground squirrels, and mice, but also some birds, reptiles and insects. Ferruginous hawk is a State Species of Special Concern.

**Prairie Falcon** (*Falco mexicanus*): Prairie falcons breed throughout the arid West from southern Canada to central Mexico. The overall distribution appears to be stable. Prairie falcons are uncommon residents and migrants of open grassland, savannah, and desert scrub habitats. They are found in areas of the dry interior where cliffs provide secure nesting sites. In the desert they are found in all vegetation types, though sparse vegetation provides the best foraging habitat.

They prey mostly on small mammals, birds, and reptiles, hunting mostly in the early morning and late afternoon except when feeding nestlings or when prey is scarce. During the nesting season, they typically forage within 6 miles of the nest.

Within the Study Area it is not known to what extent they move seasonally, but wintering populations in the Study Area are larger than breeding populations.

Historic impacts have included eggshell thinning from pesticide residues, conversion of habitat to agriculture, robbing of eyries by falconers, and shooting. Prairie falcon is a State Species of Special Concern.

**Burrowing owl (*Speotyto cunicularia*):** Burrowing owls range from Texas west to California and from southern Canada south into Mexico. In northern climates they migrate south into the area in the winter. Burrowing owls were formerly common throughout much of California prior to the 1940's, but populations in central and southern California have declined in many areas due to agricultural development and urbanization. Little is known of the status of the burrowing owl in the California desert. Concentrations probably occur in agricultural drainage ditches of the Study Area, just as they do throughout the Imperial and Coachella Valleys. Threats to burrowing owls are habitat conversion and destruction of ground squirrel burrows. Other threats may be accumulated pesticides, direct mortality from ground squirrel poisons, roadside shooting, and burrow destruction from canal and road maintenance. The burrowing owl is a State Species of Special Concern, BLM Sensitive Species, and a USFWS Sensitive Species.

#### Sensitive Plant Species

**Orocopia sage (*Salvia greatae*):** An evergreen shrub associated with Sonoran Desert Scrub and Desert Dry Wash Woodland (Creosote Bush Series, Blue Palo Verde-Ironwood-Smoketree Series). This species prefers sandy gravelly soils and is found along dry washes, alluvial slopes and fans. It is known only from the Orocopia Mtns., where we have 26 records. Orocopia sage is a BLM Sensitive Species and is categorized as a California Native Plant Society 1b species.

**Mecca-aster (*Xylorhiza cognata*):** A perennial shrub associated with Sonoran Desert Scrub (Creosote Bush Series). Rare and found only in Riverside CO. This species prefers low-elevation dry canyons and gypsum, clay soils. We have seven records for this species, all from the Mecca Hills. Mecca-aster is a BLM Sensitive Species and is categorized as a California Native Plant Society 1b species.

**California ditaxis (*Ditaxis serrata* var. *californica*):** An annual or perennial sub-shrub associated with sandy or rocky soils in creosote bush scrub (Creosote Bush Series). It is a BLM Sensitive Species and CNPS List 3 species.

#### Cultural Resources

The project area is bounded by the Orocopia Mountains to the south and by Interstate 10 and the Eagle Mountains to the north. The mountains influenced the pattern of travel in the area and the valleys between them provide an east west travel corridor and a route from the Colorado River to San Geronio Pass and the coast beyond.

During the 1950's the Johnstons recorded several segments of trail running between the Big Maria Mountains and San Geronio Pass. These trail segments were recorded as CA-Riv-53T and represent a prehistoric travel route with associated ceramic and lithic scatters, occupation

sites, and rock art sites.

Riverside County established an official county road from Blythe through the project area in 1914. Highway 60 was constructed in the 1920's through the Chuckwalla Valley and south through Box Canyon to Mecca. In the 1930's Highway 60 was modified to connect directly to Indio. Interstate 10 was completed in 1968.

During the ethnographic period the project area fell within the traditional use area of the Cahuilla Indians. However, because the area served as a major travel route, other groups are known to have used the area. These include the Chemehuevi and Mojave.

During the historic period the area contained small towns or roadside stops associated with the county road and highways. Most of these were abandoned when the Interstate was completed. Chiriaco Summit represents a roadside stop that survived the construction of I-10. Other historic period activities include mining, the construction of the Colorado River Aqueduct, and the establishment of the WWII Desert Training Center.

The Eagle Mountain mine is located north of the project area and was the largest iron-producing mine in the region. The Eagle Mountain railroad, constructed in the late 1940's, served to transport iron from the mine south to the Southern Pacific Railroad at the Salton Sea. The Eagle Mountain railroad passes through the eastern portion of the project area.

The Colorado River Aqueduct was constructed between 1933 and 1938. The aqueduct, and associated construction camps and features, is located north of Interstate 10 and outside of the project area.

The Desert Training Center was established by General George S. Patton Jr. in 1942. The Desert Training Center (DTC) was intended to prepare troops for combat in North Africa. Camp Young, the first of several Divisional Headquarters, is located north of Highway 60 and outside of the project area. However, the area south of the highway was used for training maneuvers and includes several features associated with the DTC.

Class III, intensive pedestrian, cultural resources inventories were conducted of all sites proposed for restoration. The results are documented in: Kind, Aaron S. "*Cultural Resources Survey for the Proposed OHV Restoration Routes in the Chuckwalla Valley*" November 2004. A total of six archaeological sites were recorded. These include foxholes, tank tracks, and linear stone features associated with the Desert Training Center. Other historic period sites include trash deposits consisting primarily of oil cans and broken bottles and dishware.

A single prehistoric site was identified. The site consists of an outcrop of quartz that appears to have been quarried for tool stone. A low density lithic scatter surrounds the quarry.

The restoration team will be given instruction in how to distinguish between modern trash and historic deposits greater than 50 years in age. They will consult with PSSC archaeological staff before removing any material that may exceed 50 years of age. The restoration team will also be given an introduction to the types of archaeological sites typical of the project area. If any previously unidentified cultural resources or artifacts are encountered during the proposed restoration activities, all work will cease and the PSSC Cultural Resources Specialist will be notified.

## 2. Land Status

1. **Land Use Classification:** Majority 'Multiple Use Class L,' some 'Multiple Use Class M'
2. **Valid Existing Rights:** The proposed action does not affect any existing rights-of-way. Some restoration sites are adjacent to rights-of-way of Southern California Edison, FERC, Imperial Irrigation District, Kaiser Eagle Mountain and/or Kaiser Steel Corporation, but the proposed action does not interfere with or block these rights-of-way. Access to private land in the Meccacopia SRMA is not precluded by the proposed action.

## ENVIRONMENTAL CONSEQUENCES

### 1. Critical Elements

The following table summarizes potential impacts to various elements of the human environment, including the "critical elements" listed in BLM Manual H-1790-1, Appendix 5, as amended. Elements for which there are no impacts will not be discussed further in this document.

Environmental Element	Proposed Action	No Action Alternative
Air Quality	Short-term	Reduced by wind erosion from exposed roads
ACEC's	N/A	N/A
Cultural Resources	Potential effect	May increase impacts
Native American Concerns	N/A	N/A
Farmlands	No impact	No impact
Floodplains	No impact	No impact
Energy (E.O. 13212)	No impact	No impact
Minerals	No impact	No impact
T&E Animal Species	Potential effect	May increase impacts
T&E Plant Species	Potential effect	May increase impacts
Invasive, Nonnative Species	Beneficial impact	No impact
Wastes (hazardous/solid)	No impact	No impact
Water Quality (surface and ground)	No impact	No impact
Wetlands/Riparian Zones	No impact	No impact
Wild and Scenic Rivers	No impact	No impact
Wilderness	No impact	No impact



Environmental Justice	No impact	No impact
Health and Safety Risks to Children	No impact	No impact
Visual Resource Mgt.	Improve visual quality of Project Area	Scars remain, diminishing visual quality of Project Area

## 2. Discussion of Impacts and Proposed Mitigation Measures

### AIR QUALITY

#### A. Discussion of Impacts

**1. Proposed Action:** An increase in fugitive dust during wind storms could occur due to the soil disturbance as a result of the proposed action. Vehicle use on the access road will generate PM-10 emissions throughout the project. Emissions from the proposed action will be minimal. No significant offsite impacts are anticipated. Control measures are not included and are not necessary to reduce emissions from the proposed project. The proposed project does not exceed the de minimus emission levels and no further conformity determination is necessary.

**2. No Action Alternative:** Impacts would continue to occur at current levels.

#### B. Mitigation Measures

1. Use water as necessary to limit fugitive dust blowing off the site during the work if fugitive emissions exceed state and/or Riverside Co. APCD standards.
2. Curtail activities when wind speeds exceed 25 MPH.

#### C. Residual Impacts

No long term residual adverse effects on air resources are expected from the proposed action. The impacts are expected to occur during the duration of the proposed action. Once the action is completed the site should return to pre disturbance stability.

### WILDLIFE

#### A. Discussion of Impacts

##### 1. Proposed action:

*Threatened and Endangered Species: Desert Tortoise*

A small probability exists that the proposed actions could result in take of a desert tortoise during restoration activities. That take may be on the BLM-designated routes or on non-designated OHV trails during restoration activities, where heavy equipment is used. Since no heavy equipment will be used for restoration activities, the likelihood of take is extremely low.

Restoring soil contours and vegetation would create wildlife habitat, including habitat for desert tortoise and desert bighorn sheep. Restoration work may occur during active periods in the seasonal cycles of desert tortoise and desert bighorn sheep. It is not likely that burrows would be found in the trail or route beds. Desert tortoise may burrow into berms and water ditches along the sides of undesignated trails and routes that receive very little use. Changing these features during restoration could impact the burrows of tortoises and might injure individuals.

### **Other Wildlife**

No other wildlife species would be negatively affected, and no additional impacts to wildlife resources are anticipated.

**2. No Action Alternative:** Some impacts to wildlife resources would continue to occur because of continuing vegetation loss and soil erosion occurring on non-designated OHV trails.

### **B. Mitigation Measures**

In addition to the environmental protection measures incorporated in the section on the spectrum of Proposed Actions, BLM resource specialists and the US Fish and Wildlife Service have outlined additional mitigation measures in Appendix 1 of this document.

### **C. Residual Impacts**

No long term residual adverse effects on wildlife are expected from the proposed action.

### **SOILS**

#### **A. Discussion of Impacts**

**1. Proposed Action:** Restoration of non-designated trails and routes would impact soils by modifying texture, particle size distribution, chemical properties, and biological content in affected soils. Positive impacts from a restoration can include a reduction of wind and water erosion in the long-term. Smoothing and scarifying soil can expose soil to wind erosion. In addition, some temporary soil loss from wind blown erosion is likely. However, in the long-term, soil loss would decline because of increased vegetation.

The application of Permeon will have no impact on soils. Permeon is a chemically neutral substance and will not harm humans or wildlife. More information on Permeon can be accessed on the web at: <http://www.permeon.com/question.shtr>.

**2. No Action Alternative:** Under the No Action Alternative, some impacts to soils would continue to occur.

### **B. Mitigation Measures**

In addition to the environmental protection measures incorporated in the Proposed Action, BLM resource specialists may select from the list of additional mitigation measures outlined in BLM manuals/handbooks and other documents.

### **C. Residual Impacts**

There would be few residual impacts to soils after mitigation from rehabilitation activities. Generally, these activities will increase infiltration and percolation rates in affected soils, increase available water, breakup soil compaction and loss of organic matter.

### **VEGETATION**

#### **A. Discussion of Impacts**

##### **1. Proposed action:**

Most of the non-designated trails to be restored are already partially or entirely devoid of vegetation. Careless equipment operation could further damage existing vegetation. Wind and water erosion could result from inadequate or improper maintenance resulting in further damage to vegetation. Restoration under this EA would improve the vegetative cover and create more wildlife habitat with native vegetation. Populations of early-stage shrubs would be the first species to increase while in the long-term late-stage shrubs such as creosote would establish themselves in restored shrublands.

Some non-native plant species may be eradicated locally. No special status plants will be impacted.

Indirect impacts would be in the form of dust settling on the nearby vegetation stands.

**2. No Action Alternative:** Some impacts to vegetation resources would continue, such as trampling of vegetation by OHV use.

## **B. Mitigation Measures**

In addition to environmental protection measures incorporated in the Proposed Action, BLM resource specialists may select from the list of additional mitigation measures outlined in BLM manuals/handbooks and other documents. Weed treatments with herbicides will require special approval and coordination with the Palm Springs FO Weed Specialist.

## **C. Residual Impacts**

No long term residual adverse effects on vegetation are expected from the proposed action

## **CULTURAL RESOURCES**

### **A. Discussion of Impacts**

**1. Proposed action:** In locations where cultural resources have been identified adjacent to restoration sites, the project has been redesigned to avoid the resources. As a result, no cultural resources occur within the proposed project area. There will be no effect to historic properties as a result of the proposed action.

**2. No Action Alternative:** Vehicle traffic may cause breakage and displacement of artifacts and features directly and through erosion. Vehicle access to remote cultural sites also makes them vulnerable to looting and collecting of artifacts. Under the No Action Alternative access to existing cultural resources will continue.

### **B. Mitigation Measures**

A qualified archaeologist or archaeological technician will monitor restoration activities in areas where the project has been modified to avoid cultural resources.

### **C. Residual Impacts**

No long term residual adverse effects on cultural resources are expected from the proposed action

## **3. Cumulative Impacts**

This section addresses the cumulative impacts of the proposed restoration activities on the affected environment, continuing activities in and around the project area, and any foreseeable future activities. Because other activities within the potentially cumulative impact area (project area and vicinity) are generally isolated from each other and from the proposed action, either by distance or by topography, the potential for a cumulative impact on most of these identified resources is minimal.

Within the project area, loss of habitat, vegetation, and soils have led to adverse impacts to desert tortoises and creosote shrub communities. Soil loss may be contributing to decreased air and water quality although no data specific to the project area are available. Decrease in quality of these resources may result from one or more of the following land uses: grazing, non-recreational off-highway vehicle use, recreational off-highway vehicle use, and invasions of alien plants.

By following the operating and mitigation measures outlined in this document the effects of other existing and reasonably foreseeable future activities, including the proposed action, would not significantly affect an environmental resource or the continuation of existing land uses.

**FREEDOM OF INFORMATION ACT CONSIDERATIONS:**

Public comments submitted for this environmental assessment, including names and street addresses of respondents, will be available for public review at the Palm Springs-South Coast Field Office during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your comments. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

**PERSONS / AGENCIES CONSULTED:**

This Environmental Assessment incorporates the informal consultations with the US Fish and Wildlife Service and California Department of Fish and Game for the 2003 programmatic EA for restoration work in the Project Area (see EA CA-660-03-016, and associated comments).

Carol Roberts, US Fish and Wildlife Service, Carlsbad Fish and Wildlife Office

Eddie Konno, California Department of Fish and Game, Bermuda Dunes

Kim Nicol, California Department of Fish and Game, Bermuda Dunes

**PREPARED BY:**

Starry Sprenkle, ECO Restoration Ecologist

Jason Tinant, ECO Natural Resources Specialist

Wanda Raschkow, BLM Cultural Resources Specialist

**REVIEWED BY:**

\_\_\_\_\_  
Environmental Coordinator

\_\_\_\_\_  
Date

**U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
PALM SPRINGS-SOUTH COAST FIELD OFFICE**

**DECISION RECORD  
CA-660-05-10**

**NAME of PROJECT:** Northeastern Meccacopia OHV Route Restoration

**DECISION:** It is my decision to approve the proposed action as described in Environmental Assessment (EA) number CA-660-05-10. Compliance with the mitigation measures identified in the EA is hereby required. These measures are incorporated into this decision record as stipulations by reference. A copy of this Decision Record and attendant conditions of approval (stipulations) shall be in the possession of the on-site operator during all undertakings approved herein.

**RATIONALE:** This project is approved due to the beneficial effect to wildlife habitat from restoring non-designated OHV routes. The approved action is in conformance with applicable land use plans and will not cause unnecessary or undue degradation.

**FINDING OF NO SIGNIFICANT IMPACT:** Environmental impacts associated with the proposed action have been assessed. Based on the analysis provided in the attached EA, I conclude the approved action is not a major federal action and will result in no significant impacts to the environment under the criteria in Title 40 Code of Federal Regulations 1508.18 and 1508.27. Preparation of an Environmental Impact Statement to further analyze possible impacts is not required pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969.

**APPEALS:** This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations at Title 43 of the Code of Federal Regulations (CFR), Part 4, and the information provided in Form 1842-1 (enclosed). If an appeal is taken, your notice of appeal must be filed in the Palm Springs-South Coast Field Office, Bureau of Land Management, U.S. Department of the Interior, 690 West Garnet Avenue, P.O. Box 581260, North Palm Springs, California 92258, within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, pursuant to Title 43 of the Code of Federal Regulations, Part 4, Subpart E, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

**Standards for Obtaining a Stay**

Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) the relative harm to the parties if the stay is granted or denied,
- (2) the likelihood of the appellant's success on the merits,
- (3) the likelihood of immediate and irreparable harm if the stay is not granted, and

(4) whether the public interest favors granting the stay.

**APPROVED BY:**

\_\_\_\_\_  
Field Manager  
Palm Springs-South Coast Field Office  
USDI Bureau of Land Management  
690 W. Garnet Avenue; P.O. Box 1260  
North Palm Springs, CA 92258-1260

\_\_\_\_\_  
Date

## **Appendix 1: *Desert Tortoise Mitigation***

Desert tortoise clearance surveys will occur prior to all project activities. If a tortoise is observed within 100 feet of the project area, all activities potentially affecting individual tortoise will cease and will not continue until the individual has moved out of the area of impact. Any desert tortoise burrows observed within 100 feet of project activities will be avoided. The following standard tortoise mitigation measures will apply:

1. All work will take place during the desert tortoise inactive season, November 1 – March 1.
2. An employee education program must be presented to all on-site workers prior to beginning work. The program may consist of a class or video presented by a qualified biologist (BLM or contracted) or a video. Wallet-sized cards with important information for workers to carry are recommended. All on-site workers shall participate in a tortoise education program prior to initiation of reclamation activities. The operator is responsible for ensuring that the education program is developed and presented prior to conducting activities. The program shall cover the following topics at a minimum:
  - Distribution of the desert tortoise,
  - General behavior and ecology of the tortoise,
  - Sensitivity to human activities,
  - Legal protection,
  - Penalties for violations of State or Federal laws,
  - reporting requirements, and
  - Project protective mitigation measures.
3. Only biologists authorized by the USFWS and the BLM shall handle desert tortoises. The BLM or the proponent shall submit the name(s) of the proposed authorized biologist(s) to the USFWS for review and approval at least 15 days prior to the onset of activities. No activities shall begin until an authorized biologist is approved. Authorization for handling shall be granted under the auspices of consultation through the small project programmatic EA.
4. The authorized biologist shall be required on-site during the activities. The biologist will thoroughly survey the project site for presence of tortoises each day before and during construction activities. This biologist shall have authority from the operator to halt any action that might result in harm to a tortoise.
5. The area of disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries shall be delimited with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows, identified by the qualified biologist shall be avoided to the extent possible. To the extent possible, previously disturbed areas within the testing site shall be utilized for the stockpiling of excavated materials, storage of equipment, digging of slurry pits, location of office trailers, and parking of vehicles. The qualified biologist, in consultation with the project proponent, shall ensure compliance with this measure.
6. To prevent tortoises from falling in, holes shall be either fenced or covered as much of the time as possible and at all times when not attended.

7. Desert tortoises may be handled only by the authorized biologist and only when necessary. New latex gloves shall be used when handling each tortoise to avoid the transfer of infectious diseases between animals. Aside from the initial site clearance, any tortoise moved shall be placed in the shade of a shrub in the direction in which it was facing when found or at the entrance to a burrow if hibernating. In general, tortoises should be moved the minimum distance possible to ensure their safety.
8. The authorized biologist shall maintain a record of all desert tortoises handled. This information shall include for each tortoise:
  - 1) The locations (narrative and maps) and dates of observations;
  - 2) General condition and health, including injuries and state of healing and whether animals voided their bladders;
  - 3) Location moved from and location moved to;
  - 4) Diagnostic markings (i.e., identification numbers or marked lateral scutes).
9. Upon locating a dead or injured tortoise, the operator is to notify the BLM. The BLM must then notify the appropriate field office (Carlsbad) of USFWS by telephone within three days of the finding. Written notification must be made within fifteen days of the finding. The information provided must include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death, if known, and other pertinent information. Tortoise remains shall be collected, delivered to the BLM, and frozen as soon as possible. Injured animals shall be transported to a qualified veterinarian for treatment at the expense of the project proponent. If an injured animal recovers, the USFWS should be contacted for final disposition of the animal.
10. All trash and food items shall be promptly contained within closed, raven-proof containers. These shall be regularly removed from the project site to reduce the attractiveness of the area to ravens and other tortoise predators.
11. Structures that may function as raven nesting or perching sites are not authorized except as specifically stated in the plan of operation or notice. The project proponent shall describe anticipated structures to the BLM during initial project review.